NUCLEIC ACID AMPLIFICATION

ABSTRACT OF THE DISCLOSURE

Disclosed are compositions and a method for amplification of nucleic acid sequences of interest. The disclosed method generally involves replication of a target sequence such that, during replication, the replicated strands are displaced from the target sequence by strand displacement replication of another replicated strand. In one form of the disclosed method, the target sample is not subjected to denaturing conditions. It was discovered that the target nucleic acids, genomic DNA, for example, need not be denatured for efficient multiple displacement amplification. The primers used can be hexamer primers. The primers can also each contain at least one modified nucleotide such that the primers are nuclease resistant. The primers can also each contain at least one modified nucleotide such that the melting temperature of the primer is altered relative to a primer of the same sequence without the modified nucleotide(s). The DNA polymerase can be ϕ29 DNA polymerase.